PATENT



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Box Patent Application Assistant Commissioner for Patents Washington, D.C. 20231

NEW CONTINUATION APPLICATION TRANSMITTAL

Transmitted herewith for filing is the patent application of Inventor(s): Evan Y. Snyder, William P. Lynch, Xandra O. Breakefield and Karen Aboody

For (title): ENGRAFTABLE NEURAL PROGENITOR & STEM CELLS FOR BRAIN TUMOR **THERAPY**

1. Type of Application

| This new application is for | a(n) | ì |
|-----------------------------|------|---|

[]

| | | (check one ap | plicable item | below) |
|---------|--------------------------|--|------------------------------|---|
| | [] [] [] [X] | Original (nonprovisional) Design Plant Divisional. Continuation. Continuation-in-part (C-I-P). | | |
| 2. | Bene | fit of Prior U.S. Application(s) (35 | U.S.C. Secti | ons 119(e), 120, or 121) |
| | [] | The new application being transn | nitted claims | the benefit of prior U.S. application(s). |
| | | CERTIFICATION UNDER 3' (When using Express Mail, the E Express Mail co | | el number is mandator y; |
| I herel | y certify t | hat, on the date shown below, this correspon | ndence is being: | |
| [] | deposi Washii | | IAILING an envelope add | ressed to the Assistant Commissioner for Patent 37 C.F.R. Section 1.10* |
| [] | with su | afficient postage as first class mail. | [X] | as "Express Mail Post Office to Address" Mailing Label No. <u>EL 565096151 US</u> (mandatory) |
| [] | transm | TRAI itted by facsimile to the Patent and Tradema | NSMISSION rk Office (703) | |

(type or print name of person certifying)

Enclosed are ADDED PAGES FOR NEW APPLICATION TRANSMITTAL WHERE BENEFIT OF PRIOR U.S. APPLICATION(S) CLAIMED.

3. Papers Enclosed

- A. Required for Filing Date under 37 C.F.R. Section 1.53(b) (Regular) or 37 C.F.R. Section 1.153 (Design) Application
 - 21 Pages of Specification
 - 3 Pages of Claims
 - 3 Sheets of Drawing

B. Other Papers Enclosed

Copies of Power of Attorney by Assignee of Entire Interest (Revocation of Prior Powers) from Prior Application No. 09/168,350;

Copies of Statements Under 37 C.F.R. § 3.73 (b) Establishing Right of Assignee to take action from Prior Application No. 09/168,350;

Copy of 2 month Extension from Prior Application No. 09/168,350.

1 Page of Abstract

4. Additional Papers Enclosed

| [] | Amen | ndment to claims | | | | | |
|-----|---|---|-----------------|--|--|--|--|
| | [] | Cancel in this applications claimsbefore c | calculating the | | | | |
| | | filing fee. (At least one original independent claim must be retain purposes.) | ined for filing | | | | |
| | [] | Add the claims shown on the attached amendment. (Claims adde numbered consecutively following the highest numbered original | | | | | |
| [] | Prelim | minary Amendment | | | | | |
| [X] | Information Disclosure Statement (37 C.F.R. Section 1.98) | | | | | | |
| [X] | | PTO-1449 (PTO/SB/08A and 08B) | | | | | |
| [X] | Citatio | | | | | | |
| [] | Declar | aration of Biological Deposit | | | | | |
| įį | Submission of "Sequence Listing," computer readable copy and/or amendment pertaining thereto for biotechnology invention containing nucleotide and/or amino aci sequence. | | | | | | |
| [] | | orization of Attorney(s) to Accept and Follow Instructions from Rep | resentative | | | | |
| | - | ial Comments | | | | | |
| LJ | Other | ī. | | | | | |

5. Declaration or Oath (including power of attorney)

[X] Enclosed – (Copies of Power of Attorney by Assignee of Entire Interest (Revocation of Prior Powers) from Prior Application No. 09/168,350; and Copies of Statements Under 37 C.F.R. § 3.73 (b) Establishing Right of Assignee to take action from Prior Application No. 09/168,350)

7.

(37 C.F.R.

1.16(c))

15

Executed by

(check all applicable boxes)

| | | [] | joint in | presentative of in | ~ | | 1.43. half of inventor who |
|---------|-----------|----------|-----------|------------------------|--|-----------------|---|
| | | | [] | • | on required by 37 C F.F.R. Section 1.47 | | 17 and the statement See item 13 below |
| | [] | Not En | closed. | | | | |
| | | [] | | ntion is made by a | | under 37 C.F.R. | 1.41 on behalf of all |
| | | | [] | _ | e filing is authorized less called into que | | Section 1.41(d)) |
| 6. | Assign | ment | | | | | |
| | [X] | Childre | en's Med | | | | Medicine, orporation are being |
| WARNII | NG: | | | | R 37 C.F.R. Section 3.7. Notice of April 30, 1993 | | rhen a continuation-in- |
| | [] | will fo | llow. | | | | |
| 7. | Fee Ca | lculatio | on (37 C. | F.R. Section 1.16 |) | | |
| | A. | [X] | Regular | application | | | |
| | | | | CLAIN | MS AS FILED | | |
| Claims | | Numb | per Filed | Basic Fee Allowance | Number Extra | Rate | Basic Fee 37 C.F.R. Section 1.16(a) \$710.00 |
| Total C | laims | Section | on | | | | Ψ,10.00 |

- 20 =

\$18.00

0

Independent Claims
(37 C.F.R. Section 3 - 3 = 0 \$80.00
1.16(b))

Multiple Dependent Claim(s), if any (37 C.F.R. Section 1.16(d))

\$270.00

| | [] [] | Amendment canceling extra claims is enclosed. Amendment deleting multiple-dependencies is enclosed. Fee for extra claims is not being paid at this time. | | | | | | | |
|---------|-------------------|--|--|--|----------------------------|--|--|--|--|
| | | | | Filing Fee Calculation | \$355.00 | | | | |
| | В. | [] (\$320.0 | Design application 1037 C.F.R. Section 1 | 1.16(f)) Filing Fee Calculation | \$ | | | | |
| | C. | [] (\$490.0 | Plant application 0037 C.F.R. Section | 1.16(g)) Filing Fee Calculation | \$ | | | | |
| 8. | Small E | Entity: This is a filing by a small entity | | | | | | | |
| 9. | Fee Pay | e Payment Being Made at This Time | | | | | | | |
| | [] | Not Enclosed | | | | | | | |
| | | [] No filing fee is to be paid at this time. (This and the surcharge required by 37 C.F.R. Section 1.16(e) can be possibs equently.) | | | | | | | |
| | [X] | Enclosed | | | | | | | |
| | | [] | Filing fee | | \$ <u>355.00</u> | | | | |
| | | | Total Fees Enclosed | | \$ <u>355.00</u> | | | | |
| 10. | Method | l of Payı | ment of Fees | | | | | | |
| | [X] | Check in the amount of \$355.00. | | | | | | | |
| | [] | Charge Account No in the amount of \$ A duplicate of this transmittal is attached. | | | | | | | |
| 11. | Authori | ization t | to Charge Additional F | rees | | | | | |
| paper a | [X] and during | | = | authorized to charge the following plication to Account No. 50-0850. | ng additional fees by this | | | | |
| | | [X] | 37 C.F.R. Section 1.16 | (a), (f) or (g) (filing fees) | | | | | |
| | | [X] | 37 C.F.R. Section 1.16 | (b), (c) and (d) (presentation of ext | ra claims) | | | | |

| | | [] | 37 C.F.R. Section 1.16(e) (surcharge for filing the basic filing fee and/or declaration on a date later than the filing date of the application) | | | | | | | | |
|--------------------------------------|-----------|-----------|--|--|--|--|--|--|--|--|--|
| | | [] | 37 C.F.R. Section 1.17(a)(1)-(5) (extension fees pursuant to Section 1.136(a). | | | | | | | | |
| | | [] | 7 C.F.R. Section 1.17 (application processing fees) | | | | | | | | |
| | | [] | 37 C.F.R. Section 1.18 (issue fee at or before mailing of Notice of Allowance, pursuant to 37 C.F.R. Section 1.311(b)) | | | | | | | | |
| 12. | Instru | ctions as | s to Overpayment | | | | | | | | |
| | [X] | Credit | Account No. 50-0850 | | | | | | | | |
| | [] | Refun | d A | | | | | | | | |
| | | | SIGNATURE OF PRACTITIONER | | | | | | | | |
| Reg. N | No.: 34,2 | 235 | David S. Resnick | | | | | | | | |
| Tel. N | o.: 617- | 345-605 | 7 NIXON PEABODY LLP | | | | | | | | |
| | | | 101 Federal Street | | | | | | | | |
| Customer No.: 26248 Boston, MA 02110 | | | | | | | | | | | |

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Snyder et al.

Group No.:

Application No.: To be assigned

Examiner:

Filed: Herewith

For: ENGRAFTABLE NEURAL PROGENITOR AND STEM CELLS FOR BRAIN TUMOR

THERAPY

Box Patent Application Assistant Commissioner for Patents Washington, D.C. 20231

EXPRESS MAIL CERTIFICATE

"Express Mail" label number:

EL 565096151 US

Date of Deposit:

23 August 2001

I hereby state that the following attached papers and fee

- 1. Continuation Application (specification 21 pp.; claims 3 pp.; abstract 1 p.);
- 2. 3 pages of drawings;
- 3. Continuation Application Transmittal (6 pp.);
- 4. Preliminary Amendment (2 pp.)
- 5. Copy of Extension of Time from Parent Application (2 pp.);
- 6. Copies of Power of Attorney by Assignee of Entire Interest (Revocation of Prior Powers) and Statements Under 37 C.F.R. 3.73 from parent application;
- 7. Information Disclosure Statement and Form 1449 (3 pp.);
- 8. References AA-AC and CA-CF;
- 9. Check in the amount of \$355.00; and
- 10. Return Receipt postcard.

are being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10, on the date indicated above and is addressed to the Box Provisional Patent Application, Assistant Commissioner for Patents, Washington, D.C. 20231.

Zinna L. Mang

Signature of person mailing paper or fee

Filed:

For:

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

| In re application of: Snyder, E., et |
|--------------------------------------|
|--------------------------------------|

Application No.:

09/168,350

. 10..

7 October 1998

Group No.: Examiner:

1636 Yucel, I.

/ Octo

ENGRAFTABLE NEURAL PROGENITOR

& STEM CELLS FOR BRAIN TUMOR THERAPY

CERTIFICATE OF MAILING (37 C.F.R. SECTION 1.8(a))

I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being deposited with the united States Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231.

| Date: | | |
|-------|--|--|

Nicole M. Gignac

(type or print name of person mailing paper)

Assistant Commissioner for Patents Washington, D.C. 20231

STATEMENT UNDER 37 C.F.R. SECTION 3.73(b) ESTABLISHING RIGHT OF ASSIGNEE TO TAKE ACTION

1. The assignee(s) of the entire right, title and interest hereby seek(s) to take action in the PTO in this matter.

IDENTIFICATION OF ASSIGNEE

| 2 | The | Children | , | Medical | Center | Corporatio | ۱n |
|---|------|----------|---|-------------|--------|------------|----|
| / | 1110 | | • | IVICULIA AL | CCINCI | | " |

Name of assignee

Corporation – Non-profit organization

Type of assignee, e.g., corporation, partnership, university, government agency, etc.

PERSON AUTHORIZED TO SIGN

3. William New

(type name of person authorized to sign on behalf of assignee)

Vice President, Research Administration, Children's Medical Center Corporation

Title of person authorized to sign

(complete the following, if applicable)

[X] I, the person signing below, state that I am empowered to sign this statement on behalf of the assignee.

In re application of: Snyder, E., et al. Application No.: 09/168.350

Filed: 7 October 1998

ENGRAFTABLE NEURAL PROGENITOR

Group No.: 1636 Examiner: Yucel, I.

For:

& STEM CELLS FOR BRAIN TUMOR THERAPY

BASIS OF ASSIGNEE'S INTEREST

Ownership by the assignee is established as follows:

A.

- 1. a. [X]An assignment from the inventor, Evan Y. Snyder, of the matter identified above, which was recorded in the PTO on 06/28/1999 at Reel 010053, Frame 0809.
 - b. [X]An assignment from the inventor, Karen S. Aboody, of the matter identified above, which was recorded in the PTO on 06/28/1999 at Reel 010057, Frame 0825.
- 2. [] An assignment (document) separately being submitted for recordal herewith.

AND/OR

| 1. | From: | | |
|----|--------------------------|----------------------|-------------|
| | Name o | f inventor(s) | |
| | To:Recorded in PTO: Reel | | |
| | Recorded in PTO: Reel | , Frame | |
| 2. | From: | | |
| | Name of inve | entor(s) or assignee | |
| | To: | | |
| | To:Recorded in PTO: Reel | , Frame | |
| 3. | From: | | |
| | Name of inve | entor(s) or assignee | |
| | To: | | |
| | Recorded in PTO: Reel | , Frame | |

In re application of: Snyder, E., et al.

Application No.: Filed:

09/168,350

7 October 1998

Group No.: 1636 Examiner Yucel, I.

For:

ENGRAFTABLE NEURAL PROGENITOR

& STEM CELLS FOR BRAIN TUMOR THERAPY

COPIES OF DOCUMENTS IN CHAIN OF TITLE

(complete this item, if copies are being sent)

| [] | Copies of | the assignn | nent(s) | or other d | locume | ent(s) in | the chair | of title are attached as follows: | | |
|---------|-------------|-------------|---------|------------|---|------------------------------|--|---------------------------------------|--|--|
| | [] | A B | [] | 1 | [] | 2 2 | [] | 3 | | |
| | | | | | | ature o | | ized Person | | |
| | | | | | (type or print name of authorized person) | | | | | |
| | | | | | Rese The | Childre | dministrat | cal Center Corporation | | |
| Date: | 5/14 | 12001 | | | Resp | ectfull | y submitt | ed, | | |
| Custome | r No.: 2624 | 8 | | | Dav NIX 101 Bost | id S. Re ON PE Federal | esnick (Ro ABODY Street 02110 | RACTITIONER eg. No. 34,235) LLP | | |

Application No.: Filed: For:

In re application of:

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Snyder, E., et al.

09/168,350

Group No.: Examiner: 1636 Yucel, I.

7 October 1998

ENGRAFTABLE NEURAL PROGENITOR

& STEM CELLS FOR BRAIN TUMOR THERAPY

CERTIFICATE OF MAILING (37 C.F.R. SECTION 1.8(a))

I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being deposited with the united States Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231.

| Date: | | |
|-------|--|--|

Nicole M. Gignac

(type or print name of person mailing paper)

Assistant Commissioner for Patents Washington, D.C. 20231

Title of person authorized to sign

STATEMENT UNDER 37 C.F.R. SECTION 3.73(b) ESTABLISHING RIGHT OF ASSIGNEE TO TAKE ACTION

1. The assignee(s) of the entire right, title and interest hereby seek(s) to take action in the PTO in this matter.

IDENTIFICATION OF ASSIGNEE

| 2. | The General Hospital Corporation | | | | | |
|----|--|--|--|--|--|--|
| | Name of assignee | | | | | |
| | Corporation – Non-profit organization | | | | | |
| | Type of assignee, e.g., corporation, partnership, university, government agency, etc. | | | | | |
| | | | | | | |
| 3. | FRANCES TONEGUZZO, PERSON AUTHORIZED TO SIGN CORPORATE SPONSORED RESEARCH AND LICENSING DIRECTOR | | | | | |
| | (type name of person authorized to sign on behalf of assignee) | | | | | |

(complete the following, if applicable)

[X] I, the person signing below, state that I am empowered to sign this statement on behalf of the assignee.

 In re application of: Snyder, E., et al. Application No.: 09/168,350

Filed: 70

7 October 1998

7 October 1998 ENGRAFTABLE NEURAL PROGENITOR

& STEM CELLS FOR BRAIN TUMOR THERAPY

Group No.: 1636 Examiner: Yucel, I.

BASIS OF ASSIGNEE'S INTEREST

Ownership by the assignee is established as follows:

A.

For:

- 1. [X] An assignment from the inventor, Xandra O. Breakefield, of the matter identified above, which was recorded in the PTO on 06/28/1999 at Reel 010056, Frame 0125.
- 2. [] An assignment (document) separately being submitted for recordal herewith.

AND/OR

B. [] A chain of title from the inventor(s) to the current assignee as shown below:

| From: | | |
|--------------------|--------------|----------------------|
| • | Name o | f inventor(s) |
| To: | | |
| Recorded in PTO: I | Reel | , Frame |
| | | |
| From: | | |
| N | lame of inve | entor(s) or assignee |
| To: | | |
| Recorded in PTO: 1 | Reel | , Frame |
| | | |
| From: | | |
| <u></u> | lame of inve | entor(s) or assignee |
| To: | | |
| Recorded in PTO: | Reel | , Frame |

(check item below, and add details, if applicable)

[] Additional documents in the chain of title are listed in the attached Supplemental Sheet.

(Statement under 37 C.F.R. Section 3.73(b) Establishing Right of Assignee to Take Action--page 2 of 3)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

| In re appli | cation of: | Snyder, E., et al. | | | | | | |
|------------------------------------|--|--|--------------------------------|--------------------|--|--|--|--|
| Application No.: Filed: For: | | 09/168,350 | Group No.: | 1636 | | | | |
| | | 7 October 1998 | Examiner: | Yucel, I. | | | | |
| | | ENGRAFTABLE NEUR | AL PROGENITOR | | , | | | |
| | | | RAIN TUMOR THERAP | Y | | | | |
| | | W D I DINI CELEGI I CIR D | | - | | | | |
| | | CERTIFICATE OF M | IAILING (37 C.F.R. SECTION 1 | .8(a)) | | | | |
| | ĺ | | | | | | | |
| | | certify that this paper (along with any paper referred to as being attached or enclosed) is | | | | | | |
| | | sing deposited with the united States Postal Service on the date shown below with sufficient | | | | | | |
| | | is first class mail in an envelope addressed to the Assistant Commissioner for Patents. ton, D.C. 20231. | | | | | | |
| | Washingt | ni, D.C. 20231. | | | a de la companya de l | | | |
| | | | Nicole M. Gignac | | | | | |
| | Date: | | (type or print name | e of person mailin | g paper) | | | |
| | 1 | | | | ĺ | | | |
| | 1 | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| - Assistant | Commissi | oner for Patents | | | | | | |
| | on, D.C. 2 | | | | | | | |
| wasning. | Uп, D.C. 2 | 0231 | | | | | | |
| | | STATEMENT UND | ER 37 C.F.R. SECTION | 3.73(b) | | | | |
| | τ | ESTABLISHING RIGHT | | | | | | |
| | | ESTABLISHING RIGHT | OF ASSIGNEE TO TA | KE ACTION | | | | |
| 1 Th | e assion <i>eel</i> | (s) of the entire right, title | and interest hereby seek(s |) to take action | in the PTO in thi | | | |
| | e assigneed tter. | (3) of the chine right, this | and interest hereby seek(s |) to take action | i in the rio in this | | | |
| 1114 | act. | | | | | | | |
| | | | | | | | | |
| | | IDENTIFIC | ATION OF ASSIGNEE | | | | | |
| | | | | | | | | |
| | Northeastern Ohio Universities College of Medicine | | | | | | | |
| | Name of assignee | | | | | | | |
| | University - Non-profit organization | | | | | | | |
| Type of | f assignee, e.g | g., corporation, partnership, unive | rsity, government agency, etc. | | | | | |
| | | | | | | | | |
| | | THE CONTRACT OF | | | | | | |
| | PERSON AUTHORIZED TO SIGN | | | | | | | |
| _ | | | | | | | | |
| 3. | | | | | | | | |
| (type no | (type name of person authorized to sign on behalf of assignee) | | | | | | | |
| | | | | | | | | |
| Title of | person autho | urized to sign | | | | | | |

[X] I, the person signing below, state that I am empowered to sign this statement on behalf of the assignee.

(complete the following, if applicable)

In re application of: Snyder, E., et al. Application No.: 09/168,350

Filed:

For:

7 October 1998

ENGRAFTABLE NEURAL PROGENITOR

Group No.: 1636 Examiner: Yucel, I.

& STEM CELLS FOR BRAIN TUMOR THERAPY

BASIS OF ASSIGNEE'S INTEREST

Ownership by the assignee is established as follows:

- A.
- 1. [X] An assignment from the inventor, William P. Lynch, of the matter identified above, which was recorded in the PTO on 06/28/1999 at Reel 010056, Frame 0108.
- 2. [] An assignment (document) separately being submitted for recordal herewith.

AND/OR

B. [] A chain of title from the inventor(s) to the current assignee as shown below:

| From: | |
|-----------------------|------------------------|
| Name | e of inventor(s) |
| To: | |
| Recorded in PTO: Reel | |
| From: | |
| Name of i | nventor(s) or assignee |
| To: | |
| Recorded in PTO: Reel | , Frame |
| From: | |
| Name of i | nventor(s) or assignee |
| To: | |
| Recorded in PTO: Reel | . Frame |

(check item below, and add details, if applicable)

[] Additional documents in the chain of title are listed in the attached Supplemental Sheet.

In re application of: Snyder, E., et al. Application No.: 09/168,350

Filed:

7 October 1998

E:

Group No.: 1636 Examiner: Yucel, I.

For: ENC

ENGRAFTABLE NEURAL PROGENITOR & STEM CELLS FOR BRAIN TUMOR THERAPY

COPIES OF DOCUMENTS IN CHAIN OF TITLE

(complete this item, if copies are being sent)

| [] Copies of the assignment(s) or other document(s) in the chain of title are attached as a | | | | | | of title are attached as follows: | | | |
|--|---------------------------------------|--------|----|-----------------------------------|---|-----------------------------------|------------|--------------------------------|---|
| | [] | A B | [] | 1 | [] | 2 2 | [] | 3 | |
| | | | | | A | [] Uha | id Qu | Player | _ |
| | | | | | Signature of authorized person Richard J. Eplawy | | | | |
| | | | | | (type or print name of authorized person) | | | | |
| | | | | Vice President for Administration | | | | | |
| | | | | | Title | of autl | norized pe | rson | • |
| Date: | · · · · · · · · · · · · · · · · · · · | | | | Resp | ectfull | y submitte | ed, | |
| Customer N | Io.: 2624 | 8 | | | | | ··· | | |
| | | | | | | | | RACTITIONER eg. No. 34,235) | |
| | | | | | | | ABODY | | |
| | | | | | | | l Street | | |
| | | | | | | | A 02110 | | |
| | | | | (617) 345-6057 | | | | | |

7. Fee Deficiency

[X] If any additional extension and/or fee is required, charge Account No. 50-0850.

SIGNATURE OF PRACTITIONER

Reg. No.: 34,.235

Tel. No.: 617-345-6057

Customer No.: 26248

David S. Resnick

NIXON PEABODY LLP

101 Federal Street Boston, Ma 02110